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ABSTRACT

This document provides a methodology for reviewing all components of a cooperative vocational education program in order to increase the program's ability to benefit students. An introduction provides an overview of cooperative vocational education. It lists benefits to the student, school, employer, and community and discusses the relationship of cooperative vocational education to educational reform efforts. The next section provides lists of performance standards and learner outcomes that are an addition to the occupational competencies required in cooperative vocational education. Suggestions for assessment and basic academic skills prerequisites are offered. The section on structure contains four options for cooperative education program structure: one-year program, two-year program, seminar-based program, and career academy-based program. Each program is described in terms of three components: classroom activities, training site activities, and curriculum. Advantages and disadvantages of each are discussed. The operations section covers these topics: required components, role of the teacher-coordinator, training station/sponsor section, legal issues, and quality program indicators. Appendixes include the following: a guide for submitting applications for expanding new regular vocational education programs, teacher-coordinator certification standards, policy on granting credit for off-campus programs, cooperative education quality factors checklist, sample forms, and a glossary. (YLB)

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Redesigning Cooperative Vocational Education

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Introduction

Challenge

The challenge in redesigning cooperative vocational education is increasing the capacity of programs to better serve students. This increased capacity does not necessarily refer to increasing the enrollment in cooperative vocational education programs, but rather to increasing the program's ability to benefit students. In order to accomplish this goal, all components of the program must be carefully reviewed, and those that continue to contribute to program effectiveness be retained. Those components that are no longer meaningful should be modified or eliminated.

In order to meet this challenge, a project was funded by the Department of Elementary and Secondary Education, Marketing and Cooperative Education section, through the Instructional Materials Laboratory at the University of Missouri-Columbia. This project included an extensive review of the literature on cooperative education and school-to-work transition, a survey of program administrators, and an advisory committee of practitioners who reviewed the data collected and made recommendations. This document is a product of those efforts.

Overview

Students in cooperative vocational education receive classroom instruction and supervised on-the-job experience related to their occupational goals. Cooperative vocational education can operate as a separate program, or, where enrollment in a particular occupational program is sufficient, the cooperative method of instruction should be a part of an occupationally specific vocational education program.

The curriculum for classroom instruction consists of both general related group instruction and specialized instruction. The state recommended performance standards for the program provide a framework for the general related competencies. These should be included in the general related group instruction, as well as made applicable to the student's training station employment. Competencies specific to the occupational area are the basis for the specialized instruction.

Supervised employment allows the student to relate classroom instruction to the workplace. The training station must be approved by the school, and contribute directly to the development of the competencies necessary for employment and advancement in the student's chosen occupational area. Written agreements are established between the school and employers that specify the educational activities that will occur on the job. These activities must be planned and supervised by the school and the employer so that each contributes to the student's education and employability. Students must also be employed in conformity with federal, state, and local laws and regulations.

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Goals

The primary goal of cooperative vocational education is to assist the student with the transition from school to work by providing structured work experience in a controlled environment, coupled with related vocational and academic classroom instruction. Subordinate goals include the development of career awareness and clarification of career goals, the development of basic employability and workplace skills, the development of specific occupational competencies, and the development of a history of successful work experience.

History

Cooperative vocational education is the oldest work-based learning program in the United States. When cooperative education was established around the turn of the century as part of an effort to create experience-based education, students alternated weeks in school with weeks in shop during the four-year program. Federal legislation provided funding, and a resultant increase in the number of programs, during the mid-1960s; however, enrollments nationwide in cooperative education declined significantly during the 1980s as a result of a reduction in federal and state funds, and of early education reform efforts that stressed college preparatory courses.

Enrollments in cooperative vocational education programs in Missouri have shown some decline over the last 10 years, but still total more than 9,000 students. Cooperative vocational education is primarily concentrated in the vocational areas of marketing, trades and industry, and business. Most cooperative vocational education programs are one or two years in duration, with one-year programs being the predominant type of program.

Need

The educational system in the United States devotes few of its resources to preparing young people for entry into the world of work. A study by the U.S. General Accounting Office in 1990 reported that the United States spends far more per youth to train college bound students than it does to train those not pursuing a college degree, even though only 50 percent of high school graduates go on to college. Only approximately 18 percent of the total population completes a four year degree. Around 24 percent of all young people do not complete high school and enter the workforce poorly prepared.

Furthermore, while as many as 60 to 70 percent of high school students work at some point during the school year, there is little connection between their jobs and the school curriculum. Generally, schools do not provide educational opportunities that tie the requirements of the workplace to the student's studies in school, or that provide students with the skills required in the workplace. As a result, students enter the labor market in secondary employment with little opportunity for advancement or career growth.

Much of the United State's educational practice is also conducted in the abstract, even though learning by doing has long been recognized as an effective teaching method. Many students learn best when knowledge and skills are taught through applications in context with the real world. Thus, many educators are expressing interest in work-based learning as a vehicle for assisting youth with the transition from school to work.

Other nations do much better at preparing their youth for employment. Employers in Japan establish close ties to schools, with job opportunities dependent on school preparation.

Approximately 75 percent of German youth participate in that country's apprenticeship system, which has been extremely effective at preparing a skilled workforce. Recent initiatives on youth apprenticeships in this country are based on the successes of European and Asian programs. In addition, cooperative vocational education, which utilizes many components of traditional apprenticeship systems, has proven to be an effective tool for bridging the school-to work gap for American young people. These statistics and trends point to an increasing need for education methods and future work demands to be linked more effectively. While the responsibility of schools is not solely to prepare students for work, an emphasis on cooperative work strategies, experiential learning, and instruction that requires thinking skills instead of rote memorization better prepares young people for the complex workplace they will soon confront. This led the William T. Grant Foundation to recommend that:

The public and private sector give continuing attention to cooperative education, internship, apprenticeship, and other forms of hands-on, experiential learning. Cooperative education, with its emphasis on monitored work experience, usually for pay while the student is still enrolled in school, has a solid achievement record and merits far more attention than it has received...We are convinced that these experienced-based educational mechanisms offer some of the most exciting opportunities available anywhere in America for sound learning and healthy personal development (WTGF, 1988, p. 94).

Indeed, cooperative vocational education allows the school to utilize student employment in an educationally meaningful manner, and to monitor the extent of student involvement in the workplace. Cooperative education provides the student with the opportunity to apply classroom based learning to the work world, as well as gain new knowledge and skills in the workplace. Therefore, cooperative education can help prepare students for the world of work, take advantage of the learning-by-doing style that many students respond best to, and model many of the advantages that make vocational preparation programs in other countries so successful.

Benefits

The General Accounting Office (August, 1991) found that high quality cooperative vocational education programs benefit students, employers, schools, and the community by enhancing students' transition from school to work. Benefits cited by the GAO and other reports include the following:

Benefits to the Student:

- Helps in career decision-making, as students can clarify career objectives through on-the-job work experiences.
- Allows students to test classroom learning in a real-world, supervised situation.
- Increases relevance of school.
- Enables students to earn income during their cooperative vocational education experience.
- Provides training in current business practices.

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- Improves employability skills and provides valuable work experience.
- Improves self-confidence and responsibility.
- Increases motivation.
- Develops work attitudes and skills in working with others.
- Provides a smoother transition from school to work.

Benefits to the School:

- Improves relationships with businesses and the community as a whole.
- Uses community resources to improve educational opportunities and keep instruction current.
- Improves student retention and graduate placement rate.
- Updates faculty on current business and industry practices.
- Keeps curriculum up-to-date with industry demands.

Benefits to the Employer:

- Helps shape school curriculum to meet needs of business and industry.
- Provides effective screening, selection, and recruitment of employees.
- Provides better qualified part-time employees who are motivated, interested, and receptive to instruction.
- Provides training for potential permanent employees.
- Improves access to women and minorities as potential permanent employees.
- Generates above-average employee retention rates for permanent employees who participated in coop program.
- Enhances company public relations.

Benefits to the Community:

- Increases the effectiveness and relevance of education.
- Fosters a respect for work and the American free enterprise system.
- Addresses the need to assist youth with the transition from school to work, and to reduce youth unemployment.
- Provides trained people for the labor market, thus contributing to economic growth.
- Returns sizable tax revenues from student earnings as part of the cooperative education program.

Relationship to Educational Reform Initiatives

SCANS

Cooperative vocational education provides an excellent opportunity to teach the SCANS competencies (Appendix J). The Critical Skills Foundation states that cooperative vocational education programs "provide an excellent opportunity for 'in context' teaching. The essential ingredients for success include: clear objectives of the skills to be taught; an environment in which the skills may be taught; knowledgeable teachers in the school and on the job; an assessment system directly related to the skills to be learned." The Foundation suggests including the SCANS skills as part of the plan for instruction at the training station and on the student evaluation forms currently used in cooperative vocational education programs.

The IndianaPLUS program is an example of how the SCANS competencies can fit into cooperative education programs. In this program, students assessed skills required in their local workplaces and then communicated the results to other students and to the community. While these students worked primarily out of a social studies class, cooperative vocational education content also includes learning about all aspects of jobs. In addition, the content of many programs calls for increased communication skills, so the interviews required to find out what skills were required in local workplaces and the communication of the results to others fit nicely into cooperative education course content as well.

However, the introduction of SCANS competencies into established curricula can be extremely difficult. It requires new teaching skills that emphasize problem-solving and contextual learning, new instructional materials and technologies, and ways for teachers to develop a far better understanding of the nature of high performance workplaces (Kazis, 1993).

Youth Apprenticeship

Cooperative vocational education and the youth apprenticeship concept share many common components. These components include paid work experience supervised by a trained employee, formal agreements and a plan for instruction, evaluation of student progress on the job, integration of school-based and work-based learning, and granting of credit.

The programs differ in two important areas. First, youth apprenticeship is very much industry based, while cooperative vocational education is school based. In a youth apprenticeship program, the business or industry, in cooperation with the school, determines and delivers the curriculum. In cooperative vocational education, the curriculum taught in schools is based upon business and industry standards. The training station is used as the laboratory for applying classroom instruction, as well as for teaching specific occupational skills.

Secondly, youth apprenticeship programs should have a longer duration than the one or two years length for cooperative vocational education programs. Youth apprenticeship should span at least two years, preferably encompassing both the secondary and postsecondary education levels.

Finally, participation in cooperative vocational education can lead to participation in registered apprenticeship training. In some states students who successfully complete a cooperative program can apply up to 150 classroom hours of instruction toward the requirements for apprenticeships registered with the U.S. Department of Labor Bureau of Apprenticeship and Training. In other cases agreements between the school and apprenticeship program operator stipulate the specific arrangements for apprenticeship credit.

Tech Prep/Associate Degree Programs

The Tech Prep/Associate Degree program focuses on providing meaningful educational and career preparation for the majority of high school students who do not complete baccalaureate degrees. Through Tech Prep, students are prepared after high school to

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enter the workforce and to continue their education. The Tech Prep concept links secondary and postsecondary education programs through formal articulation agreements. These agreements, based upon a competency-based curriculum that combines academic and occupational subjects, are developed by business, secondary schools, and postsecondary institutions. Tech Prep thus provides an unduplicated sequence of instruction that challenges students and effectively prepares them for the type of workforce the United States needs to compete in the global marketplace.

Cooperative vocational education should be an integral part of Tech Prep education. The training station secured during the high school years can serve as the focus for an educational plan leading up to an Associate Degree. The training station can also provide insight into the current and future uses of technology, provide training on equipment and processes not usually available in schools, and provide the opportunity for the student to continue development of skills through supervised application at the work place - all of which can help the student meet the challenges of the Tech Prep program and the workplace. In addition, working with businesses to develop curriculum and to supervise students on the job can improve the knowledge of Tech Prep instructional staff regarding current skill requirement, practices, and procedures in the workplace.

School-to-Work Transition

Because cooperative vocational education programs have an outstanding record of helping young people make the transition from school to the world of work, they should be an important part of the system to provide assistance with the school-to-work transition for young people. Indeed, many students are offered permanent employment at the conclusion of their cooperative education experience.

Cooperative vocational education provides parts of the three components of a school-to-work transition system described in the School-to-Work Opportunities Act of 1994 (STWOA). First, through collaboration and cooperation with training sponsors, the program provides work-based learning consisting of planned, paid work experience that includes supervision by the school and the business training sponsor. Next, the training plan specifies the occupational and general workplace competencies to be developed by the student. Finally, the training plan serves as the basis for student evaluation by both the teacher-coordinator and the training sponsor.

Cooperative vocational education also provides many of the connecting activities described in the STWOA. A coop program develops potential training stations, then matches these with student interests and career goals. The program then assists training sponsors with strategies for working with young people at the job site. The program also modifies its curriculum to meet the needs of the training sponsors and communicates additional curriculum needs to the school. Finally, the program provides student follow-up information and assistance with job placement upon completion of high school. In these ways, the cooperative education program serves as a connecting link between the school, the employer, the student, the student's family, and the community.

Performance Standards and Authentic Assessment

Performance standards set forth clear expectations of what students should know and be able to do as a result of the educational process. The use of performance standards, combined with performance based (or authentic) assessment, develops in the student the ability to transfer discipline-based knowledge and skills to other disciplines, higher education, and the world of work.

Vocational education has a long history of using occupational competencies and learner outcomes as the basis for curriculum development. These competencies and outcomes, which prescribe what students should know and be able to do and provide an opportunity for instructors to assess the student's level of mastery, are in effect performance standards for the vocational program areas. The use of competencies developed by both the school and the training sponsor places cooperative vocational education in the unique position of having a curriculum that is not only based on competencies or performance standards, but also one that is specifically tailored for each employer and each student.

The concept of authentic assessment is based on the application of skills and knowledge to real-world situations. Cooperative vocational education provides continuing authentic assessment in the work place as the student applies academic and vocational classroom learning on the job. Coaching, mentoring, and supervisor evaluations provide formal opportunities to assess the student's performance authentically. The performance of assigned duties at the training station also provides the student with continual feedback on successes and on areas that need improvement, so the assessment is ongoing. Cooperative vocational education is learning by doing and assessment by doing.

Students generally do not graduate from secondary education with high levels of ability in abstract thinking, problem solving, communication, or decision making. It is hoped that the performance standards adopted for Missouri will raise students' abilities in these areas. Cooperative vocational education, through curriculum competencies and learner outcomes that relate to the standards and are delivered in the classroom and on the job, provides the student the opportunity to develop these abilities in the real world, where the relevance and value of these abilities are most apparent.

Curriculum

The goal of cooperative vocational education programs is to assist in preparing students to assume roles as responsible and productive members of the workforce. More specifically, the programs should prepare students for successful transition from school to the world of work. In order to accomplish this goal, the curriculum should develop employability and general workplace competencies, as well as specific occupational competencies. The performance standards and learner outcomes included here are an addition to the occupational competencies required in cooperative vocational education programs, whether they be Marketing, Business Education, Agriculture or other occupationally specific programs. The standards and outcomes may also be used as the foundation for other vocational or school-to-work programs.

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To further the goal of preparing students to make the transition from school to work, assessment of the standards and outcomes should be authentic; that is, it should take place in a variety of settings, and through many different means. In addition, the basic academic skills that are a prerequisite for participation in a cooperative vocational education program should be reinforced throughout the program.

Performance Standards

Performance standards are intended to provide a clear set of expectations toward which all cooperative vocational education teachers and students must work. The standards need to direct, support, and allow for many ways to organize the curriculum and deliver instruction.

The performance standards are implemented through the expected learner outcomes listed after the performance standards. These outcomes must be integrated into individual curriculum guides for each district. This curriculum must be supported by assessment activities that are tied specifically to learner outcomes, and by appropriate instructional methods and resources.

Performance Standards

Students will demonstrate the ability to:

- Plan for, develop, seek, and apply for employment opportunities.
- Apply their understanding of economic principles and trade-offs to workplace situations.
- Work independently and on teams; teach others; serve customers; and lead, negotiate, and work well with people from culturally diverse backgrounds.
- Apply their understanding of social, organizational, and technological systems to design and improve situations and tasks in the workplace.
- Demonstrate individual responsibility, self-esteem, sociability, and integrity.
- Assess the risks, rewards, personal attributes, and opportunities associated with entrepreneurship.
- Recognize the importance of life-long learning.
- Demonstrate occupational competence.

Learner Outcomes

Learner outcomes should reflect the knowledge and skills required of students. They should be assessable, and should focus on application in the workplace. While learner outcomes do not translate directly into curriculum, they do indicate how the performance standards can be applied both in the classroom and on the job.

Expected Student Learning Outcomes

Workplace Readiness

The student will be able to:

- Assess personal interests and abilities relative to career choice
- Acquire and use career information
- Identify how to prepare for careers of interest
- Develop a career plan
- Use labor market information
- Develop and apply job searching skills
- Prepare a resume
- Meet the standards of dress and grooming for an employment interview within an industry
- Complete the job application process
- Demonstrate effective interviewing skills
- Exhibit positive work attitudes and behaviors
- Identify how to prepare for job separation and re-employment

Economics and Entrepreneurship

The student will be able to:

- Interpret the effects, advantages, and disadvantages of the open shop versus the closed shop
- Describe the ways in which the government is involved in our economy
- Delineate the differences between different economic systems
- Describe the circular flow of economic activity
- Describe how economic trade-offs affect decisions in the workplace
- Identify the characteristics of the free enterprise system
- Define entrepreneurship
- Identify characteristics, aptitudes, and skills of successful entrepreneurs
- Compare advantages of owning a business versus working for someone
- Describe typical entrepreneurial characteristics
- Identify his/her entrepreneurial aptitudes and skills
- Evaluate the different types of business opportunities that relate to his/her skills and career interests

Technology Awareness

The student will be able to:

- Identify applications of technology within the workplace
- Utilize appropriate technology

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Interpersonal Skills and Leadership Development

The student will be able to:

- Recognize the components of a lifestyle as they relate to the workplace.
- Relate aptitude and ability to career success.
- Develop effective interpersonal skills:
 - Offer and accept criticism constructively.
 - Respect the opinions, customs, and individual differences of others.
 - Interact in a socially appropriate manner.
- Demonstrate leadership skills:
 - Demonstrate how positive leadership characteristics can assist an individual within an industry.
 - Demonstrate the capacity to accept responsibilities.
 - Participate in group and committee discussions to reach group consensus.
- Recognize citizenship responsibilities as they are related to a career.
- Demonstrate effective team building skills.
- Demonstrate effective negotiation skills.

Occupational Communications

The student will be able to:

- Use written communication skills in the workplace:
 - Describe the advantages that a written message may have over a spoken one.
 - Read and understand written communications in the workplace.
 - Compare and contrast different forms of written business communication as utilized in the workplace.
- Use oral communication skills in the workplace:
 - Demonstrate listening strategies that improve understanding and performance on the job.
 - Comprehend and give oral instructions in a business like manner as related to the workplace.
 - Demonstrate proper business-like methods of placing/receiving telephone calls and recording telephone messages.

Occupational Mathematical Computations

The student will be able to:

- Calculate work-related mathematical situations:
 - Compute addition, subtraction, multiplication, and division of whole number problems as related to an industry
 - Compute addition, subtraction, multiplication, and division of decimal number problems as related to an industry
 - Interpret quantitative information from tables, charts, and graphs as related to the workplace
 - Compute ratios and percentages as related to the workplace.

- Calculate distance, weight, area, volume, and/or time problems as related to the workplace
- Determine costs, time, or resources needed to complete a task within the workplace

Occupational Safety

The student will be able to:

- Identify safety issues related to the workplace:
 - Describe actions that various agencies take to prevent accidents on the job.
 - Identify how accidents on the job can be caused through human error.
 - Identify potentially hazardous situations and apply appropriate solutions.
- Demonstrate good safety practices.

Occupational Competence

The student will be able to:

- Identify job skills required for career success.
- Demonstrate entry-level job skills.
- Identify opportunities to continue learning at the workplace.

Assessment

Assessment must provide information to determine how well students are meeting the performance standards and learner outcomes. Each assessment must be directly related to a specific learner outcome. Unless the assessment ties to a specific learner outcome and is developed through the instructional process, the teacher-coordinator runs the risk of assessing what was not taught, or not assessing the sought-after outcome.

A system for recording and reporting student mastery is required in order to have a high level of accountability, and to gather useful information about how to organize and deliver instruction effectively for all students. This system should include a wide variety of methods. Those methods that require the student to demonstrate knowledge and skills, referred to as authentic assessment, are preferable to objective tests of retained facts. These methods include a check-off list manually prepared by the teacher coordinator, a student portfolio, a computer-based instructional management system, or some combination of these and other methods. Through methods like these, students are able to demonstrate that what they have learned is useful in their lives, both now and later. Thus, assessment methods should allow the student to demonstrate the application of knowledge and skills in an appropriate and meaningful way.

Cooperative vocational education provides many opportunities to assess students' abilities. In the classroom these include: the traditional testing methods; individual and team projects; research and written papers; simulation and demonstration projects; and innovative assessment methods based upon technology, such as videotaping, computer based projects, and distance learning.

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The opportunities to assess student knowledge and skills on the job can present themselves through the normal assigned duties of the student, and through planned activities conducted on the job at the direction of the teacher-coordinator and with the cooperation of the student's supervisor. These assessments may be conducted by the teacher-coordinator, by the supervisor, by the student, or by a combined effort of all three.

There are also many opportunities to assess students' abilities in a less structured environment. Vocational student organizations provide excellent opportunities for students to develop and demonstrate leadership and team building skills. Involvement with community projects and competitive events not only benefits student development, but also presents many opportunities for the student to demonstrate mastery of established standards and outcomes.

Examples of Performance Based Assessment of Standards and Outcomes

- Students will complete research (including library research, requests for information, and personal interviews) on a place of business or corporation for which they would like to work. Based on their findings, they will determine an action plan for education and training to prepare them for the job, as well as plans for how to approach the application and interview process.
- Students will research the skills and abilities required for chosen professions and identify postsecondary training and/or educational institutions with particular reputations in the student's selected area.
- Students will prepare an employment portfolio.
- Students will prepare for and perform a videotaped job interview and then evaluate their performance against specified criteria, identifying areas for improvement and ways to enhance their skills.
- Students will develop a business plan for a new business organization and present the plan to a commercial loan officer of a community bank for evaluation and critique.
- Students will analyze and present statistical data pertaining to a company's sales and production through charts developed from computer spreadsheets.
- Given a scenario of a business, students will make and defend decisions involving allocation of time, money, materials, space, and staff.
- Students will prepare a user's manual on a software package.
- Students will participate in a business simulation as members of various departments within a business (e.g., human resources, product development, marketing, advertising, administrative services) to produce documents and presentations for management.

Prerequisites - Basic Academic Skills

In addition to occupationally specific skills and performance standards and learner outcomes, students must master academic skills if they are to successfully make the transition from school to work. Cooperative vocational education presents a unique opportunity to integrate basic and advanced academic skills into a curriculum that stresses the application of these skills to the world of work.

Basic academic skills include the essential knowledge, skills, and abilities in arithmetic, communications, and cultural awareness that individuals need to function independently in society. The basic academic skills needed for entry level employment include:

- Arithmetic,
- Cultural awareness,
- Listening,
- Reading,
- Speaking, and
- Writing.

Advanced academic skills include those acquired through logical and creative enhancement of the basic academic skills. The advanced academic skills needed to sustain a career include:

- Abstract thinking,
- Applied science,
- Creative thinking,
- Cultural diversity,
- Mathematics,
- Problem solving, and
- Self-directed learning.

Teacher-coordinators in cooperative vocational education programs must take the opportunity to develop basic and advanced academic skills as they conduct their programs. This can be accomplished through some assessment methods, and through direct instruction, instructional methods used in the classroom and on the job, student projects and reports, and activities on the job.

Structure

Cooperative vocational education programs have three essential elements: the classroom instruction; the work site training; and vocational student organizations. These elements are integrated by a curricular program design that blends them together. For many years cooperative vocational education programs have followed a traditional one-year, or perhaps two year, program structure. The redesign of cooperative education, in order to better serve students' needs, requires new options to these traditional program structures.

This section contains four options for cooperative vocational education program structure. They are by no means the only possible methods in which programs may be arranged; rather, they represent examples of both traditional methods and more recent trends noted in the literature. Programs might be structured to contain elements of these four programs, or to include other variations not included in this project. These four structures are provided to give guidance and inspire new ideas as teacher coordinators and vocational administrators evaluate their own cooperative vocational education programs.

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It should be noted that as programs are redesigned, some basic Department of Elementary and Secondary Education (DESE) requirements exist concerning time spent in related class instruction, time spent on the job, and how applicable hours of credit are awarded. Other regulations exist concerning granting of credit for off campus programs; cooperative vocational education's work site-based training stations are considered off campus programs, and must adhere to these regulations. Teacher coordinators or administrators who are redesigning their own programs need to be aware of these regulations. They are included in the appendices of this project. However, requests for pilot programs that vary from these regulations will be considered. The Director of Marketing and Cooperative Vocational Education, DESE, should be consulted for assistance in this matter.

The four options for cooperative vocational education program structure redesign presented in this section are:

1. A one-year program,
2. A two-year program,
3. A seminar-based program, and
4. A career academy-based program.

Each program is described in terms of the three components: classroom activities, training site activities, and curriculum. Advantages and disadvantages of each are provided. No program is without disadvantages, but specific advantageous components may be lifted from various programs and applied by teacher-coordinators to their own programs.

Option One: One-Year Program

This option is the traditional one-year cooperative vocational education program. In addition to other classes, students are scheduled for one class period per day that is taught by the cooperative vocational education teacher-coordinator. Generally, the last one or two class periods per day are scheduled for on the job training. The one year program is restricted to seniors.

Curriculum

The one-year program must provide a curriculum that concentrates on preparing the student for the successful transition from school to employment. The curriculum must provide both general related group instruction and individualized occupational specific instruction. Typically, the curriculum is geared to general instruction at the beginning of the school year and moves to more individual instruction as the year progresses. Learner outcomes in the areas of workplace readiness; interpersonal skills and leadership development; technology, economics and entrepreneurship; and the occupational areas of communications, math, safety and skills should form the base for the curriculum. Assessment should be performed both in the classroom and at the work place, and it should be competency based.

Class

The related class can be either in a DESE-approved vocational education program (such as Fundamentals of Marketing in Marketing Education or Office Technology in Business Education) or in a separate class specifically for students in cooperative vocational education.

The certified teacher coordinator provides both classroom instruction and supervision at the worksite. Classroom instruction must be related to the development of competencies required to be successful in the workplace. One credit hour may be awarded for classes that meet one period per day (minimum 7830 minutes per year) and follow other DESE regulations.

Training Site

Students in the one year program generally have the last one or two class periods of the day assigned to work at the training site. Students that average 10 hours of on-the-job training per week can be awarded one credit hour, and students that average 20 hours of on-the-job training per week can be awarded two credit hours. The student works with a training sponsor who is approved by the teacher coordinator. Assessment on the job is completed jointly by the teacher-coordinator and the training sponsor; however, the teacher-coordinator has the final responsibility. On the-job experiences and assessment are based on the training agreement and instructional plans completed by the teacher-coordinator, the training sponsor, and the student. All DESE policies for the award of off-campus credit in cooperative vocational education must be followed.

Advantages

This is a traditional program, and it is well known by potential employers throughout the state. The program provides early workplace exposure to students that may lead to employment after graduation. It permits the student to earn both wages and credits toward graduation. Training station placement and work activities are individually designed for each student's career interests. The quality of jobs and learning experiences of cooperative vocational education students are superior to the standard jobs that students not in cooperative vocational education obtain. Cooperative work experiences may transfer to some post-secondary educational programs. The one-year program may be the best option for schools with low enrollment that are unable to offer more specialized courses or training station experiences.

Disadvantages

Cooperative vocational education is often viewed as short-term employment, rather than career training. The traditional program is not structured to allow easy integration of academic and vocational instruction. The one-year option may not provide sufficient class time to ensure coverage of general related instruction and occupationally specific instruction. Teacher-coordinators may not have sufficient time for planning or training station visits. Teacher-coordinators may not be knowledgeable in the wide range of student career options. Training stations may vary widely in the range of learning experiences and career opportunities offered to students.

Option Two: Two Year Program

The two-year program is an extension of the traditional one-year program. It allows for both juniors and seniors to be enrolled. Students are scheduled for one class period per day of related instruction, taught by the teacher-coordinator. Both general related group instruction and occupational specific instruction is offered. Generally, the last one or two class periods are scheduled for on-the-job training.

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Curriculum

The two-year program includes a curriculum that provides specialized occupational instruction. The first year's class is typically designed to provide general workplace skills and is usually a prerequisite for the second year. The second year provides individualized occupationally specific instruction, based on the students' career interests and goals. The learner outcomes in the first year are the same as those in the one-year program; learner outcomes for the second year are individually designed and are typically extensions or variations of the first year's learner outcomes. Assessment is performed both in the classroom and at the training station and should be competency based.

Class

As in the one-year program, the related classes can be either in a DESE approved vocational education program (such as Fundamentals of Marketing and Advanced Marketing in a Marketing Education program) or in a separate class specifically for students participating in cooperative vocational education (such as Cooperative Education 1 and Cooperative Education 2 in a Cooperative Education program). Junior level students may enroll in the two-course sequence over the two years; senior students may enroll in the beginning-level course if the prerequisite course has not been completed. Programs that utilize the two-year program and that include sufficient numbers of students may offer specialized courses during the second year (such as Free Enterprise Economics, Supervisory Management, Salesmanship, and Fashion Merchandising in a Marketing Education program). Students in approved vocational education programs like Marketing, Business, Agriculture, or Technology and Industry may enroll in classes only, or they may enroll in classes and in a cooperative work experience. Some schools permit both types of students in the same class, while other schools mandate one or the other to all students. For those utilizing cooperative vocational education, the classroom instruction must be related to the competencies required for success on the job. One credit may be earned for each year of classroom instruction, provided that the class meets for a minimum of 7830 minutes and meets other DESE regulations.

Training Site

As in the one-year program, students may have one or two class periods assigned to work site training, usually the last class periods of the day. Both juniors and seniors may participate in the training station component of the program; however, many schools limit this activity to seniors. Students averaging 10 hours of on the job training per week may earn one hour of credit, and students averaging 20 hours of on-the-job training per week may earn two hours of credit. The number of credits earned at the training station can never exceed more than twice the number of credits earned in the related classroom. Assessment on the job is completed jointly by the teacher-coordinator and the training sponsor; however, the teacher coordinator has the final responsibility. On the job experiences and assessment are based on the training agreement and instructional plans completed by the teacher-coordinator, the training sponsor, and the student. All DESE policies for the award of off-campus credit in cooperative vocational education must be followed.

Advantages

Because they are structured similarly, both the one-year and two-year programs share many advantages and disadvantages. The two year program can offer more specialized instruction tailored to individual student career interest. Students with two years of on-the-job training

should receive a wider range of learning experiences and activities, and thus develop a broader picture and understanding of all aspects of the industry in which they are employed. Students with one prior year of related classroom instruction may be easier to place in a training station during the second year of the program.

Disadvantages

Again, there are many similarities between the one and two year programs with regard to disadvantages. A two-year program may not be suited for many schools with low to moderate enrollments. Specialized classes in the second year require either more teacher-coordinators or teacher coordinators with greater expertise in a wide range of occupations. Individualized occupationally specific classroom learning activities are increased in the two year program; this requires more time for planning, curriculum development, and assessment. There may not be an adequate number of quality training stations for increased numbers of potential students in a two-year program, and time required for the teacher coordinator to obtain and visit training stations is also increased.

Option Three: Seminar-Based Programs

Seminar-based programs may take many forms. The general structure for such a program may be thought of as a combination of two components of the traditional programs; namely, classroom activities and on-the-job experiences. Seminar-based programs may offer combined credit and grades for the two portions (class site and work site) of the program, rather than offering them separately. Related classroom instruction and on-the-job training are still essential components of the program. Classroom instruction is offered one or two days a week, usually during the last class period(s) of the day. On-the-job training is then scheduled for the other three or four days of the week during the last class period(s) or after school hours. A typical arrangement is to have classroom seminar discussions on Monday and Tuesday, with the rest of the week scheduled for training station activities.

Curriculum

The seminar-based programs may be one or two years in length. While both general related instruction and occupationally specific instruction are offered, there is an emphasis on individualized instruction and activities. This arrangement may be utilized by approved vocational programs or for cooperative vocational programs. For cooperative vocational programs, this arrangement works best if there are groups of students with similar career goals and training station placements for seminar discussions. In this case, classroom seminar discussions may actually take place at the workplace if space is provided by the employer. The classroom or seminar portion of the curriculum is based on the learner outcomes as listed in the one-year program description; however, more occupationally-specific learner outcomes can be developed for groups of students with similar career goals and training station placements. The teacher-coordinator is responsible, with the assistance of the training supervisor, for assessment of student learning.

Class

The related class can be either part of an approved vocational education program or a separate class for cooperative vocational education. The teacher-coordinator provides the classroom instruction and supervision at the worksite. Classroom instruction must be related to the

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competencies required for success in the work place. While the class meets in a seminar format once or twice a week, no credit or grade is earned just for the class portion; rather, credit is given for the combination of classwork and training station activities. Generally, for the junior year, one credit may be earned, and for the senior year, one or two credits may be earned. The seminar class may be scheduled when convenient; however, a specified day or days allows for more efficient planning in both the classroom and at the training station. Typical class schedules are Mondays, Mondays and Tuesdays, Tuesdays and Wednesdays, or Mondays and Fridays. A further option is to have class meet alternately one or two days per week. Depending on the number of days class meets and the hours of credit granted, class time is for one or two class periods.

Training Site

Students in the seminar-based program have one or two class periods, three or four days a week, assigned to the training station. Students averaging 10 hours of on the job training may earn one credit, students averaging 20 hours of on the job training may earn two credits. Assessment on the job is completed jointly by the teacher-coordinator and the training sponsor; however, the teacher-coordinator has the final responsibility. On-the-job experiences and assessment are based on the training agreement and instructional plans completed by the teacher coordinator, the training sponsor, and the student. Assessment in the seminar based program places more emphasis on the work-based learning activities than the classroom-based activities. All DESE policies for the award of off-campus credit in cooperative vocational education must be followed.

Advantages

The main advantage of the seminar-based program is flexibility. Classroom activities that require more than the traditional one class period may be utilized in a seminar class that lasts for two periods one or two days a week. Many of these activities are those that promote problem solving, critical thinking, and other desired skills. Seminar-based programs, with longer class times, may also allow for easier integration of academics with vocational programs. Students and employers have more flexibility in their schedules at the work station on those days not in seminar. Alternating days in the classroom and at the work place permits easier alignment with block scheduling.

Disadvantages

Seminar-based programs require more planning on the part of the teacher-coordinator. Classes that meet only once or twice a week, for one or two class periods, require a different kind of lesson planning and sequencing of activities. More individualized instruction requires more expertise on the part of the teacher-coordinator. Combining credits and/or assessment for the classroom and work place components may be difficult. More flexible programs may also mean less structure, guidance, and assistance in developing the program.

Option Four: A Career Academy-Based Program

A career academy is a school within a school, where a subset of students takes common courses from a team of teachers. This subset of students could represent all cooperative vocational education students in a comprehensive high school, or a more specific group or groups, such as marketing education students. The underlying principle is that all students with a similar

career interest take all classes as a group, from a coordinated team of teachers from various disciplines, with the entire curriculum oriented toward the specific career interest. The one-year, two year, or seminar-based cooperative vocational education programs could all operate within a career academy structure.

Curriculum

Career academies organize the core curriculum around a career-related theme. Career academies prepare students for both work and post secondary education. The goal of the career academy model is that the curriculum be fully integrated and offer general employability skills. Most career academies focus on a set of related careers in fields of high demand, rather than specific occupations. The learner outcomes for the cooperative vocational education program, or the learner outcomes for any other vocationally approved program, serve as the base for the vocational portion of the curriculum. A more comprehensive curriculum, involving all disciplines, is developed that integrates the occupational theme into all classes. A career academy could possibly have several groups of students (often arranged as teams), each with a different career cluster orientation. Each group would move from class to class, and each class (representing all academic disciplines) would integrate the career option into its specific curriculum. Credit is earned for on-the-job training, subject to the same regulations as all cooperative vocational education programs.

Class

The cooperative vocational education class in a career academy-based program would be similar to those offered in the one- or two-year programs. The related class could be in any vocationally approved program, or could be a separate class specifically for cooperative vocational education. The class would award one credit, subject to DESE regulations. The difference with this program, however, is that all other classes integrate the career option into their activities, providing for full integration of vocational and academic subjects. The vocationally certified teacher-coordinator provides classroom instruction for the cooperative vocational education class and supervises the student at the worksite; all other teachers would be certified in their own content areas.

Training Site

There is no difference between the requirements for the training site in academy programs and other cooperative vocational programs. Students averaging 10 hours of on the job training per week may earn one hour of credit, and students averaging 20 hours of on the job training per week may earn two hours of credit. The number of credits earned at the training station can never exceed more than twice the number of credits earned in the related classroom. Assessment on the job is completed jointly by the teacher-coordinator and the training sponsor; however, the teacher coordinator has the final responsibility. On-the-job experiences and assessment are based on the training agreement and instructional plans completed by the teacher-coordinator, the training sponsor, and the student. All DESE policies for the award of off-campus credit in cooperative vocational education must be followed.

Advantages

Students in a career academy experience a curriculum completely integrated around their choice of career cluster. All students, including college preparatory students, can participate in career academy programs. Career academies can be initiated within comprehensive high

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schools or area vocational schools. Academic subjects are taught in context. Vocational subjects are taught to apply academic subject material. This program, with defined career clusters, meshes well with Tech Prep initiatives and permits articulation into post-secondary education. The coordinated curriculum allows students to work on problems that cut across disciplines, thus promoting critical thinking, analysis, and problem-solving skills.

Disadvantages

Career academies require a totally redesigned curriculum that is difficult to develop because of cost, tradition, and turf protection. Expenses to start a career academy may be prohibitive, considering the new supplies, equipment, and instructional materials required for an integrated curriculum. It may be difficult to find teachers with the ability to work within a fully integrated structure because it is a rather new phenomena. Career academies may appear to be competition (for funding) to college preparatory programs or area vocational schools. An image may also exist that academies are only for less advantaged students.

Operations

Required Components

DESE Approval

Vocational education programs must be approved by the appropriate section of the Division of Vocational and Adult Education, Missouri Department of Elementary and Secondary Education. Requests for program approval must be submitted as outlined on form FV-3, Guide for Submitting Applications for Expanding/New Regular Vocational Education Programs (Appendix A). Programs that include cooperative vocational education must meet guidelines as set forth by section directors, as well as the Department of Elementary and Secondary Education policies for approval of off-campus programs (Appendix C).

Certificated Teachers

Teacher-coordinators must hold a teaching certificate, issued by the Department of Elementary and Secondary Education, that is appropriate for their teaching assignment. For vocational programs that serve a variety of occupational areas, either a Cooperative Occupational Education or Cooperative Industrial Education teaching certificate is required. For vocational programs that use cooperative education in the areas of Agriculture, Business, Occupational Home Economics, Marketing, or Industrial Education, teacher-coordinators must meet the required certification standards in the program area. The DESE director of each program area should be contacted with questions regarding certification requirements. The current requirements are included in Appendix B.

Related Instruction

Cooperative vocational education requires that the student receive in-school instruction that is specifically related to their on-the-job training experience *concurrent with* their participation in on-the-job training. Most commonly the related instruction involves one class period a day,

and on-the-job training requires one or two periods per day. Other options include alternating days for class and on-the-job training, seminar-type related instruction classes, and on-the-job training outside of the regular school day. (Refer to the Structure portion of this publication for further explanation of these options.) The related instruction must contribute directly to the development of competencies required to be successful in the workplace.

Minutes of Instruction

In order to award one unit of credit, a course must meet for at least 7,830 minutes a year (45 minutes a day for 174 days). Half- and quarter-units of credit may be earned for courses meeting proportionately fewer minutes. For on-the-job training, credit is granted based on documented clock hours of employment at the training station. One-half unit of credit per semester may be awarded for 10 hours of employment per week, and one unit per semester for 20 hours per week, with a maximum of two units per year allowed for on-the-job training, except when specific program approval to give additional credit has been granted by the Department of Elementary and Secondary Education.

Class Size

Effective class size should be determined by the curriculum and methods of instruction. Because the related classroom instruction for cooperative vocational education requires a variety of instructional techniques and individualized curriculum, it is recommended that class size not exceed 25 students. Facilities, equipment, and instructional materials available in the school may dictate a smaller class size.

Recommended Requirements for Students

Cooperative vocational education programs should be open to all students who want to be involved and who can benefit from the program. Any selection criteria adopted by the school must be tied directly to specific requirements for success in the program. Care should be taken to insure that selection criteria do not discriminate on the basis of race, color, sex, marital status, religion, national origin, age, sexual orientation, or disability.

Sample student selection criteria are included below.

1. The student has a career objective that can be developed through the cooperative vocational education program.

The objective of a cooperative vocational education program is to prepare the student for successful entry into and advancement within a chosen occupation. Therefore, the classroom instruction and cooperative education experience must be directly related to the student's occupational goal. Many students, including those who intend to pursue a college degree, can be served through occupationally specific vocational programs that offer cooperative education, such as Marketing Education, or through multi occupational programs, such as Cooperative Industrial Education. However, unless the program can make a substantial contribution to the student's level of knowledge and skill with respect to the career objective, other

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- curricular offerings may be more appropriate.
2. The student meets the minimum age of 16 for most employment situations.

For most employment situations encountered in cooperative vocational education, students must be 16 years old. The Fair Labor Standards Act prescribes specific guidelines for workers under the age of 18. This federal law requires that individuals employed in occupations classified as "Hazardous Occupations" must be at least 18 years of age. However, with certain provisions, this requirement may be waived for students who are at least 16 and who are enrolled in a cooperative training program.

3. The student has the ability to benefit from participation in the program and an interest in doing so.

Student interest in participating in cooperative vocational education is a primary requirement. Students who are interested in developing their occupational competencies through a combination of classroom instruction and on-the-job training, and who understand that the program is an extension of the classroom curriculum and a laboratory of sorts for the application of knowledge and skills, rather than a work release program, should be considered potential enrollees.

Students should also meet the personal and academic standards deemed appropriate by the school and employers. While participation in a cooperative vocational education program will further develop a student's basic academic skills, he or she should reach an acceptable level of achievement in these skills before enrollment in the program. Cooperative vocational education is an enhancement to a student's academic and vocational preparation, not an alternative to it.

4. The student will meet the requirements for graduation.

Participation in cooperative vocational education should not interfere with a student's program of study requirements for graduation. The student's record should be reviewed to ascertain if required courses will be completed as scheduled and if adequate elective hours are available for the cooperative vocational education program.

5. The student does not have other activities that will interfere with scheduling the cooperative education on-the-job training.

Potential conflicting activities should be discussed with the training sponsor prior to beginning the cooperative vocational education experience. While some training sponsors may be willing to accommodate students' occasional requests for specific schedules or time off, consideration should be given to the demands on the training sponsor of maintaining a work schedule. Participation in the cooperative vocational education program should be a priority for students.

6. The student has appropriate transportation available.

Transportation to and from the training station is the responsibility of the student. Students must have access to appropriate, timely, dependable transportation in order to participate in cooperative vocational education.

7. The student agrees to consult the teacher-coordinator before terminating employment or seeking other supervised employment.

The training station should be viewed as a high school class. Students must not change training stations or terminate their employment without the approval of the teacher-coordinator. Because training agreements are established and Instructional Management Plans are developed for each training station placement, the student risks loss of credit should they not adhere to this requirement.

Training Agreements

Training agreements are an important element for cooperative vocational education programs. These agreements enumerate the specific responsibilities of each party involved in the program. Although the training agreement is not a contract or legal document, it does serve as a demonstration of commitment. The provisions included on the agreement should be honored by all parties, except when changes are mutually agreed to by all parties.

The following topics are usually included on the training agreement:

- Purpose of the training agreement
- Career goal of the student
- Duration of the training period
- Minimum and maximum hours of work
- Wage rate for the student
- School credit to be earned by the student
- Employer responsibilities
- School and teacher-coordinator responsibilities
- Parent responsibilities
- Student responsibilities
- Non-discrimination disclaimer clause
- Signatures of those involved

A sample agreement is included as Appendix F.

Training Plans and Instructional Management Plans

Cooperative vocational education requires that the training station be utilized to further develop the knowledge and skills of students participating in the program. This goal is best accomplished through the development of a detailed plan of instruction, developed jointly by the teacher-coordinator and the training sponsor, to be carried out at the work site. These training plans should list the competencies that the students will develop at the training station

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and the activities that will lead to the development of these competencies. They should also indicate the classroom curriculum that supports the competencies. Training plans should be developed at the beginning of the cooperative vocational education experience with the full participation of the training sponsor. They should be reviewed frequently during the year.

The Instructional Management Plan (IMP) is designed to correlate classroom instruction with the sequenced application experiences for the student. The IMP serves as the master plan for the training sponsor, the coordinator, and the student. The IMP is developed from the curriculum base of the program and student's career objective, with appropriate modifications made by the coordinator and training sponsor.

Application experiences are those activities designed to assist the student in reaching his/her career objectives. They include classroom work, on-the-job experiences, and vocational student organization activities. If the student is to obtain experiences with job tasks that are related to the career goal, and to gain experience that will prepare her or him for advancement, it is necessary to design application experiences that the training sponsor, teacher-coordinator, and student believe appropriate and feasible. Some of these application experiences may involve observation of the job, interviews with the manager or other employees, and consultation with the training sponsor to obtain information. Writing a report of such observations and interviews may be done at home, or sometimes in the classroom, but the activity itself should take place on the job because the training station or job is the source of the information.

Either training plans or Instructional Management Plans are necessary if the cooperative vocational education experience is to be truly an educational experience for the student. The use of these plans by the teacher-coordinator within the cooperative vocational education program should provide application experiences for the student that will provide better insight into the occupational area and help develop job skills.

Coordination Time

The program teacher-coordinator must have adequate time available to perform the many tasks associated with supervising students in cooperative vocational education training stations. These tasks begin with developing appropriate training station placement opportunities, and they continue throughout the year as the teacher-coordinator makes site visits, coordinates each student's training plan or IMP with the classroom curriculum, monitors student progress at the training station, counsels the student, and maintains adequate record keeping systems. Teacher-coordinators must have one hour of their teaching schedule devoted to supervision of cooperative vocational education students for each 12 to 15 students. In addition, teacher-coordinators must have one week of extended contract time for each 12 to 15 participating students. Extended contract time is necessary so that the teacher-coordinator can develop training station placements, match students with these placements, and prepare required materials. Making time for both supervision and extended contracts is directly related to maximizing the educational benefits of the program to students.

Vocational Student Organizations

A local chapter of a vocational student organization (VSO) is an essential element for an effective cooperative vocational education program. The VSO is a valuable instructional tool to help students mature, develop occupational and leadership skills, and become involved in

their community. Vocational student organizations provide opportunities for students to develop and refine the skills required in their chosen occupational area through the use of competitive event programs, community and school activities, student conferences and workshops, and other activities, making education more enjoyable and more effective.

VSO activities are fully integrated into the instructional program as a supplement to regular classroom instruction. Properly planned and conducted VSO activities strengthen learning in the classroom and at the training station.

The VSO also provides an additional means for the students' training sponsors to become involved with the cooperative vocational education program. Training sponsors can serve as advisors for student competitive event projects, or as judges during competition. Training sponsors can assist VSO chapters with identifying civic projects that could benefit the entire community; indeed, VSO members might become student members or guests of appropriate civic or professional organizations.

Role of the Teacher-Coordinator

The cooperative vocational education teacher-coordinator has many responsibilities, including tasks related to the following roles: teaching, coordination, guidance and counseling, public relations, and administration.

The success of the program depends upon: (1) how well the teacher-coordinator performs the tasks included in these roles and (2) how well the teacher-coordinator is able to plan and organize the work to maintain balance among the various functions. The teacher-coordinator's efforts should always be directed toward the primary program goal—preparing students to enter into and advance within their careers.

The Teaching Role

The primary role of the teacher-coordinator is teaching. Teaching involves directing a learning program that will permit students to master the attitudes, skills, and knowledge necessary for success in the world of work. In performing the teaching role, the teacher-coordinator must: (1) teach attitudes, skills, and knowledge that are prerequisites for good performance on a real-life job; (2) help students plan their jobs and community experiences; (3) assist students in forming concepts and principles from their on-the-job learning experiences; (4) guide students in developing academic and higher order thinking skills; and (5) advise the local chapter of the vocational student organization.

The Coordination Role

Coordination is an educational activity directed toward the improvement of instruction via combining the efforts of all who influence the learner. Coordination involves developing and selecting training stations, placing students, evaluating student progress on the job, and coordinating classroom curriculum with experience at the job site.

The Guidance and Counseling Role

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As a career counselor, the teacher-coordinator has responsibility for student recruitment, selection, job placement, and counseling. Good communication must be maintained with school guidance counselors, as they are aware of students who might benefit from the cooperative vocational education program.

The Administrative Role

The extent of the teacher-coordinator's administrative role varies according to the local education agency. Generally, the teacher-coordinator will be involved in a wide variety of administrative responsibilities that include planning, budgeting, reporting, evaluating, and supervising. Many of these tasks are performed in relation to the other roles.

The Public Relations Role

The teacher-coordinator must continuously interpret the program for the public. Therefore, the teacher-coordinator must attempt to achieve good public relations by practicing good human relations in daily activities and through planned publicity.

The teacher-coordinator is the key to a successful cooperative vocational education program. The role of the teacher-coordinator is complex in that it involves the usual competencies required of the classroom teacher and also the insights important for career guidance and for bringing the business community into cooperative alliance with the school.

Professional Preparation

Competencies needed by the cooperative vocational education teacher-coordinator to perform all aspects of her or his role are the attitudes, skills, knowledge, and understanding deemed necessary to perform the critical tasks of the job. Both technical subject matter competencies and professional competencies are necessary.

Technical competencies refer to abilities teacher-coordinators need in order to help students develop the qualifications that workers need if they are to enter into and advance within a particular career field. These competencies are associated with the various technical areas taught in the cooperative vocational education curriculum. Technical competencies are developed through participation in technical courses and occupational experience.

Professional competencies refer to those competencies necessary to perform the cooperative vocational education teacher-coordinator's total job. Professional competencies include those necessary to carry out the following job functions: teaching, coordination, guidance and counseling, public relations, and administration.

Specific certification standards for cooperative vocational education differ with each program area. However, all standards include:

- Approved occupational experience in a field related to the program area;
- Subject matter coursework to support the technical competencies; and
- Professional education coursework, to include a course in Coordination of Cooperative Vocational Education

Specific program area requirements may be found in Appendix B.

Training Station/Sponsor Selection

The selection and development of training stations for student placement is perhaps, next to the teacher coordinator, the most critical element in the success of a cooperative vocational education program. The training station must provide the student with supervision and an opportunity to apply classroom instruction to the practical experience. Teacher-coordinators should evaluate training stations using factors like those identified by the National Center for Research in Vocational Education (1986): the present employment practices; reputation in the community; ongoing training programs for employees; willingness to work with the teacher-coordinator and the student; hours and wages available; types of learning experiences; facilities and equipment available; and accessibility of location. A checklist for evaluating training stations is included as Appendix G.

The selection of the training sponsor should be considered as important as the selection of the training station. The training sponsor will have the responsibility for providing the student with a meaningful experience. Potential training sponsors should exhibit a willingness and ability to assist in training the student and work with the teacher-coordinator, and should possess expertise in the occupational area, good communication skills, and the ability to serve as mentor and role model for the student.

Legal Issues

Employment Relations

Cooperative vocational education guidelines require that students be employed. The employment relationship between student and training station produces a more authentic, more productive learning experience. As an employee, the student is covered under the workers' compensation policy of the training station.

Questions occasionally arise regarding working on a "contracted services" basis, and regarding under what conditions a student is actually an employee. In general, an employee, as distinguished from an independent contractor who is engaged in a business of his or her own, is one who "follows the usual path of an employee" and is dependent on the business that he or she serves. The factors that the Supreme Court has considered significant, although no single one is regarded as controlling, are:

- The extent to which the services in question are an integral part of the employer's business;
- The permanency of the relationship;
- The amount of the alleged contractor's investment in facilities and equipment;
- The nature and degree of control by the principal;
- The alleged contractor's opportunities for profit and loss; and
- The amount of initiative, judgment, or foresight in open market competition with others required for the success of the claimed independent enterprise.

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Except in rare instances, employment on a "contracted services" or self-employment basis is not appropriate for students in a cooperative vocational education program.

Whether students are employees will depend upon all of the circumstances surrounding their activities on the premises of the employer. If *all* of the following criteria apply, the students are not employees:

- The training, even though it includes actual operation of the facilities of the employer, is similar to that which would be given in a vocational school;
- The training is for the benefit of the students;
- The students do not displace regular employees, but work under their close observation;
- The employer that provides the training derives no immediate advantage from the activities of the students; on occasion, operations may actually be impeded;
- The students are not necessarily entitled to a job at the conclusion of the training period; and
- The employer and the students understand that the students are not entitled to wages for the time spent in training. (WH Pub. 1297, revised 5/80)

Work Certificates

Missouri state law provides for the issuance of work certificates by the superintendent of schools of the district in which the student resides. Work certificates permit the employment of students between the ages of 14 and 16 during nonschool hours during the school term. The certificate serves to verify age to the employer and to insure that no student under 16 years of age is employed in an occupation, or in a manner, that is hazardous or detrimental to the student's educational process. The certificate can be issued at the request of the student or employer. In order to issue a certificate, the superintendent must be satisfied that the employment is in the best interests of the student. Applications must be made in person by the student with written permission of the parent or legal guardian. The application must be accompanied by:

- A statement of intent to employ signed by the prospective employer that states the nature of the job, hours of the day, number of hours per day, and days per week the student will be working;
- Proof of age of the student, such as a birth certificate;
- A physician's certificate stating that the student has been examined and is in good mental and physical health;
- A certificate from the student's principal giving the student's grades.

Child Labor Regulations

Missouri statutes and federal laws govern child labor. The age of 14 is the minimum age for employment in specified occupations, with certain exceptions, for limited periods of time each day and each week. The basic minimum age for employment is 16. At this age youth may be employed in any occupation other than a nonagricultural hazardous occupation. The minimum age for employment in nonagricultural hazardous occupations is 18.

Students who are 16 and 17 years of age may be exempted from the hazardous occupations requirements if:

- The student is enrolled in an approved cooperative vocational training program; and
- There is in place a training agreement that specifies that the student's work in the hazardous occupation is:
 - Incidental to the training,
 - Intermittent and for short period of time,
 - Under close supervision,
 - Undertaken after safety instruction has been given, and
 - Undertaken as part of a plan for training on the job.

Wages Paid to Student Learners

Students in cooperative vocational education programs should be employed at a wage-rate commensurate with that paid to other beginning employees in the same position. When the employer must comply with the minimum wage provisions under the Fair Labor Standards Act, then that wage rate should be at least the minimum wage. There are provisions for student-learners to be employed at wages below the statutory minimum, but not before the employer files an application with the Wage and Hour Division. These provisions are described in Regulations, Part 520, under the Fair Labor Standards Act. Students who are at least 16 years of age and who are receiving instruction in an approved vocational training program administered by an accredited school may be approved to receive 75 percent of the minimum wage during the school year of their enrollment in the cooperative vocational education program. The authority to employ student-learners at subminimum wages will be granted only to the extent necessary to prevent curtailment of employment opportunities.

Immigration Law

The Immigration Reform and Control Act of 1986 seeks to preserve jobs for those who are legally entitled to them: American citizens and aliens who are authorized to work in this country. The law says that employers should hire only American citizens and aliens who are authorized to work in the United States. Employers need to verify employment eligibility of anyone hired after November 6, 1986, and complete and retain a one-page I-9 form.

Employers must do these five things:

1. Have employees fill out their part of the Form I-9 when they start to work;
2. Check documents establishing employees' identity and eligibility to work;
3. Properly complete the Form I-9;
4. Retain the Form for at least three years (if the person is employed for more than three years, the form must be retained until one year after the person leaves employment); and
5. Present the Form for inspection to an INS or Department of Labor officer upon request.

The Immigration and Naturalization Service is responsible for implementing this new law.

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Insurance and taxes

The Employment Security Law, as amended March 10, 1982, exempts from coverage service performed by an individual under the age of 22 who is enrolled in a non-profit or public educational institution that:

- Normally maintains a regular faculty and curriculum;
- Normally has a regularly organized body of students in attendance at the place where its educational activities are carried on;
- Combines educational instruction with work experience; and
Does grant academic credit for work experience.

Students meeting these criteria should not be reported on any employer's contribution and wage report as submitted to the Division of Employment Security because they are not in employment as defined in the employment Security Law. REF: Missouri Employment Security Laws and Regulations, 10-82, 288.034 - (14)p. 39.

Targeted Jobs Tax Credit

The Targeted Jobs Tax Credit (TJTC) program offers employers a credit against their tax liability for hiring individuals from nine target groups, including youth ages 16 through 21 from economically disadvantaged families, who participate in a qualified cooperative vocational education program. The certification process is as follows:

1. The teacher-coordinator provides the student with an income determination form, with the address of the local Employment Security office on the form.
2. The parent completes the form and sends it to the designated address for the local Employment Security office.
3. The state Employment Security Office makes the economic determination by validating the form and notifies the teacher-coordinator of the student's eligibility status.
4. The teacher-coordinator completes the certification form, Form 6199, and sends it to the employer. The teacher-coordinator must maintain a copy of the completed Form 6199.

For additional information on TJTC, contact the Director, Marketing and Cooperative Vocational Education, Department of Elementary of Secondary Education, or the local Employment Security office.

Quality Program Indicators

Earlier in this section the required components for cooperative vocational education were listed. These components put in place a structure that facilitates the development of curriculum competencies in the workplace. In addition, the United State General Accounting Office (1991) reported that cooperative vocational education programs of high quality share key elements. These are: (1) written training plans that detail specific learning objectives for students to achieve during their co-op experience; (2) screening of students by the teacher-coordinator; (3) selection of employers who provide quality training in occupations with

career paths; (4) classroom instruction related to the job training; (5) close supervision of students' training by the teacher-coordinator; and (6) strong support by administration and faculty. When these components are fully implemented and operated in a rigorous manner, cooperative vocational education can achieve its potential as an important tool for assisting young people with the transition from school to work. A checklist of quality cooperative vocational education components is included as Appendix D.

Program Evaluation

A critical element of program operation is periodic evaluation. The teacher-coordinator should conduct an annual evaluation of program effectiveness. This evaluation will provide information for program revision and improvement.

A variety of data sources should be used to conduct the evaluation:

- Information about student learning can be taken from records indicating student mastery of the established curriculum competencies.
- Program completion and retention rates, as well as school graduation and retention rates for students previously enrolled in the program, can provide valuable information on the program's ability to serve student needs.
- Follow-up studies of program completers and their employers are important sources of information. Student placement, effectiveness of the curriculum and instructional process, and suggestions for improvement of the program can be gathered through the follow-up process.
- Other sources could include the DECA program of activities and evaluation report, advisory committee input and recommendations, and business/industry information on labor market demand and employment needs.

Data should be gathered from these sources and compiled for review. After analysis of the data, the teacher-coordinator should develop a written report. The report should include a description of the program, documentation of its current effectiveness, and recommendations for program improvement. The evaluation report should be shared with advisory committee members, school administrators, and other interested parties.

The Missouri School Improvement Program (MSIP) includes standards and performance measures specifically for vocational education programs. The MSIP process is designed to assist school districts in improving the educational opportunities for all students, and to assess how well each district is meeting the standards established by the State Board of Education. Each cooperative vocational education program should conduct its own program improvement review, based on the MSIP standards, prior to the district's MSIP review. This will allow the teacher-coordinator to determine how well the program is meeting the established standards, and will ensure that the cooperative vocational education program is an integral part of the MSIP review process and the district's school improvement plan.

The *Missouri Marketing Education Program Improvement Review Guide* and the *Missouri Marketing Education Program Evaluation Guide*, both available from the Instructional Materials Laboratory at the University of Missouri-Columbia, are excellent resources for conducting program level evaluations.

Appendix A

Fv3: Guide For Submitting Applications For Expanding New Regular Vocational Education Programs

The following outline constitutes the minimum information necessary to review the appropriateness of application for expanding/new regular full-time preparatory vocational programs. Prepare and submit a separate proposal for each program to the State Director of Vocational Education on or before March 1. The local education agency (LEA) will be notified concerning the approval or disapproval of each program application.

I. General Information

- A. Identify the program by U.S. Department of Education CIP code number and program title. (Postsecondary institutions - state precise name of major or specialization, and degree or certificate, if any, to be awarded upon successful completion of the program.)
- B. Indicate how the need for the program was determined - employment opportunities, current and projected trends, on the advice of administration or an advisory committee, etc. If applicable, describe the local district's cooperation with the JTPA administrative entity in the development of the program application.
- C. Provide the names of program advisory committee members and their occupations. To what extent has the proposal been reviewed by the advisory committee? If applicable, what is the nature of outside reviewers' appraisal?
- D. What department or other unit will administer the program? How will program supervision be provided - by whom, frequency of supervisory visits, how much time will be required to supervise the program, etc.?
- E. Identify the building which is to house the program. What is its location in the LEA? Describe the space to be utilized for the program.
- F. State the relationship of the proposed program to present offerings and to long-range plans of the LEA.
- G. What is the proposed date for initiating the program?

II. Instructional Information

- A. State the program objectives in measurable terms.
- B. Provide a topical outline of major units or divisions in the vocational program/course(s).
- C. List instructional materials, major texts and references to be used.
- D. Describe standards of performance or level of proficiency expected at program completion. Include a listing of program/course competencies/student learner outcomes.

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III. Student Information

- A. Describe how students will be selected for program participation. What is the anticipated number of students to be enrolled in the program?
- B. Describe the educational guidance and counseling services to be provided.
- C. Describe the planned student placement procedures that will be provided for program completers.
- D. Describe the planned student follow-up procedures.
- E. Explain the student participation in vocational student organizations sponsored by the Division of Vocational and Adult Education.
- F. Describe how the program is to be made accessible to all special populations (single parents, displaced homemakers, nontraditional students, disadvantaged students, students with disabilities, etc.).

IV. Budget

- A. Provide anticipated salary expenditure for the program.
- B. List major equipment items currently available for the program.
- C. Itemize proposed equipment, teaching aids, and supply expenditures for the program.
- D. Outline long-range plans for major equipment item purchases.

V. Evaluation

- A. Identify evaluation instrument(s) to be used in evaluating the effectiveness of the program.
- B. Explain the procedures and/or methods of evaluation to be used in determining the results. Relate the results to the program objectives.
- C. Indicate how the results of the evaluation are to be utilized.

Individual applications for adult supplemental courses (500 hours of instruction or less) may be submitted as need arises. Please contact the appropriate state program director for information concerning the application/approval process for adult supplemental courses.

From: Department of Elementary and Secondary Education
Division of Vocational and Adult Education
P.O. Box 480
Jefferson City, MO 65102

Appendix B

Missouri Certification Standards For Cooperative Occupational Education Teacher-Coordinator

- I. The Certification requirements for all vocational instructors, as provided in the State Plan, must be met by Cooperative Occupational Education teacher-coordinators.
- II. Requirements for Five-Year Certification.
 - A. Baccalaureate Degree.
 - B. Two years or 4,000 hours of approved occupational experience is required.
 - C. Twenty-five (25) semester hours of approved subject matter course work.
 1. Ten (10) semester hours minimum from the area of Marketing with courses such as Retailing, Merchandising, Advertising, Salesmanship, Sales Promotion, et cetera.
 2. Ten (10) semester hours minimum from the area of Industrial Education with courses such as Drafting, Metal, Woodwork, Industrial Relations, Labor Problems, Power Mechanics, Electricity, Graphic Arts, World of Construction, Introduction to Industry, et cetera.
 3. Five (5) semester hours minimum in excess from the above two areas or from general business, economics, or business administration.
 - D. Twenty-four (24) semester hours of approved professional education courses which must include:
 1. Eight (8) semester hours of vocational education course work. Specifically, courses must include the following:
 - a. Coordination Techniques
 - b. Methods of Teaching Marketing or Industrial Education
 - c. Curriculum for Marketing or Industrial Education
 - d. Additional course work in vocational education for the eight (8) hour total. Courses might include Philosophy of Vocational Education, Vocational Guidance, Occupational Analysis, Vocational Youth Organizations, Adult Programs in Vocational Education.

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2. The remaining semester hours may include professional education courses such as Teaching Methods, Educational Psychology, Principles of Teaching, et cetera, to include at least six (6) semester hours of student teaching.

III. Requirements for Two-Year Certification.

A. Baccalaureate Degree

- B. Two years or 4,000 hours of approved occupational experience is required.

C. Subject Matter Course Work.

1. Five (5) semester hours of approved subject matter course work in Marketing.
2. Five (5) semester hours of approved subject matter course work in Industrial Education.

D. Professional Education Courses.

1. Twelve (12) semester hours of professional education course work with a minimum of four (4) semester hours of vocational education which includes a course in Coordination Techniques and one in either Methods of Teaching or Curriculum for Marketing Education or Industrial Education, plus at least six (6) semester hours of student teaching.

IV. Requirements for Certification Renewal.

A. Five-Year Certificates

1. Attendance of each annual vocational state conference (MVA) during the five-year period.
2. Completion of two college credit courses contributing specifically to the certification specialty.
3. Substitutions to above requirements may be made as follows:
 - a. A workshop or institute of fifteen (15) or more clock hours or one hundred twenty (120) clock hours of appropriate occupational experience may be substituted for attending a conference. No more than two conference requirements may be satisfied through substitution.
 - b. A workshop or institute of fifteen (15) or more clock hours or one hundred twenty (120) clock hours of appropriate occupational experience may substitute for each of the two college courses.

B. Two-Year Certificates

1. Completion of at least three semester hours of outstanding deficiencies for a five-year certificate.
2. Attendance at each annual vocational conference (MVA) during the two year period.
3. Substitution for one of the conferences in the above requirement may be made as follows:

A workshop or institute of fifteen (15) or more clock hours or one hundred twenty (120) clock hours of appropriate occupational experience may substitute for one conference. No more than one conference requirement may be satisfied through substitution.

Evidence of completed requirements must be supplied by the teacher-coordinator to the Department of Elementary and Secondary Education with requests for certificate renewal. No more than two renewals are available for two-year certificates.

September 1, 1988

Appendix C

Policy On Granting Credit For Off-Campus Programs Other Than Dual-Credit College Courses

Many students who are juniors and seniors in high school can benefit substantially from school-directed and supervised learning experiences which cannot be readily provided within a regular school setting, but which can be made available through assignment to off-campus locations under cooperative arrangements with business and industry or other institutions. The Department of Elementary and Secondary Education recognizes and will approve the five types of off-campus programs discussed below. A school district may offer other types of off-campus programs without Department approval, but the students enrolled in them may not be counted in membership and attendance for state aid purposes, and the students may not be granted high school credit for the off-campus experience (Auth: Section 161.092 and 161.122, RSMo).

Academic programs operated off-campus ordinarily involve students who are enrolled in advanced academic or fine arts classes and have as their goals the acquisition of specialized knowledge and the ability to apply the knowledge to situations which cannot be replicated in a school classroom.

Cooperative vocational education programs involve students enrolled in approved cooperative vocational education programs. The primary goals are the acquisition of specific job skills and demonstrated performance of those skills on the job. Students participating in cooperative vocational education programs are expected to perform productive work during their off-campus experience and may receive pay for it. Programs must meet standards of the Division of Vocational and Adult Education and be approved by that Division.

Work experience for special education students is limited to students with disabilities whose individualized education programs (IEPs) indicate the need for work experience and who are also eligible as clients of the Division of Vocational Rehabilitation. Program goals include the acquisition of general skills related to performing work under supervision, as well as job-related skills. Students with disabilities may receive pay for the performance of productive work in an approved program.

Career exploration programs involve students who have not yet selected occupational goals and who will benefit from exposure to a variety of occupations, as practiced on the job site so that they may develop their own occupational objectives from direct experience. Students in career exploration programs must receive related instruction as a part of the regular high school program and be placed at off-campus sites in accordance with the provisions for granting high school credit in off-campus programs. Students in career exploration programs may spend no more than nine weeks (an academic quarter) at a particular job site, and then must be rotated through other job sites of interest at least every nine weeks for the duration of the program. The specific amount of time a student spends at a given job site (within the nine-week maximum) will be determined by the complexity of the occupation being studied.

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Related instruction will provide students with knowledge of occupational clusters, requisite training and experience for occupations being studied, and skills related to obtaining and holding a job. Students in career exploration programs will not be performing productive work, and may not receive pay for participation in the off-campus program.

Apprenticeship programs provide structured work-based learning experiences provided by employers within an industry or occupational cluster combined with secondary and postsecondary classroom instruction. The experience results in academic credentials and certification of occupational mastery. Apprenticeship programs must meet published criteria and are individually approved by the Division of Vocational and Adult Education.

Students in cooperative vocational education programs, apprenticeship programs, and work-experience programs for special education students who are receiving pay for work performed in an off-campus program will generally be covered by the sponsors' workers' compensation insurance and general liability insurance. Students in academic programs and career exploration programs will not be paid and will not be covered by the sponsors' workers' compensation insurance and general liability insurance. Therefore, any school district which arranges off-campus academic or career exploration programs must provide accidental injury and job-related illness insurance for students and liability insurance to cover any injuries or damages caused by students on the sponsors' premises. Liability insurance to protect the supervising teacher and any other school district employees who might be exposed to a liability risk due to the placement of students in off-campus programs should also be provided by the school district.

Since there is danger of unpaid students replacing paid employees, the school district and the cooperating sponsor should exercise extreme diligence in complying with applicable state and federal labor regulations.

All five types of off-campus programs must be well-planned and adequately supervised by school district personnel to ensure the school district's eligibility for state and federal funds and to justify the awarding of high school credit to participating students. The following general policies will apply.

I. Attendance Eligible for State Foundation Monies

To be counted for membership and average daily attendance for state aid purposes, students must be under the guidance and direction of certificated teachers employed by the public school district whether the instruction (teaching process) is on campus or off campus. Students who are at least 16 years of age and not over 21 years of age and who are under the guidance and direction of public school teachers for less than the standard school day may be counted as part-time students. (Their part-time membership and attendance are computed according to Section 163.011, RSMo.)

School districts shall not count students in membership or attendance for any type of off-campus instruction except Department-approved off-campus programs which are adequately supervised by the district's certificated teachers to the extent the students can be considered "under the guidance and direction of teachers in the teaching process" and for which the school district is granting high school credit. School districts have responsibility (and probably liability) for students during the time they are counted for school membership and attendance for state aid purposes.

II. Direction and Supervision of Students in Off-Campus Programs

As indicated in Section I, to be counted for state aid purposes, students in off campus programs must be under adequate supervision by appropriately certificated teachers of the public school district. Supervision of off-campus students is considered adequate and teachers appropriately certificated if the following standards are met:

A. Teacher Qualifications

Off-campus academic programs must be under the supervision of a teacher certificated in the subject in which the related on campus instruction is provided. For example, if students enrolled in a chemistry class are provided off-campus instruction in the chemistry lab of an industrial facility, the supervising teacher would have to be certificated to teach chemistry. If no specific certification is available, as in the case of subjects such as "computer science," a teacher who is considered qualified to teach the related on-campus class will be considered qualified to supervise the off-campus program.

Teachers holding cooperative vocational education certification are qualified to supervise students employed at training stations appropriate to the occupational categories for which the cooperative vocational education program is designed.

Work-experience programs for students with disabilities must be under the supervision of a special education teacher who has been designated and approved as a vocational adjustment coordinator. The vocational adjustment coordinator would also provide or coordinate the related instruction in the regular school program.

Career exploration programs must be under the supervision of a teacher who provides related classroom instruction in career awareness and related areas, and who has certification as a social studies teacher or as a guidance counselor.

Apprenticeship programs must be under the supervision of teachers who meet current criteria established by the Division of Vocational and Adult Education.

B. Supervision Time

The supervising teacher or coordinator must be provided scheduled supervision time within the standard school day at the ratios set out below, or if any part of the off-campus program is scheduled outside the regular school day, the school district must pay the supervising teacher or coordinator for the outside-of school time necessary to provide supervision at the ratios set out below.

- *Off-campus academic programs*: one class period daily for each ten participating students.
- *Cooperative vocational education programs*: one class period daily for each 12 to 15 participating students.

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- *Work experience for students with disabilities:* one class period daily for each 8 to 15 participating students, depending upon the nature and severity of the disabling conditions.
- *Career exploration programs:* one class period daily for each 15 participating students.
- *Apprenticeship programs:* based on individual program approval.

C. Written Plans

For each student in an off-campus program, there must be a written instructional plan, cooperatively developed between the supervising teacher or coordinator and appropriate persons at the off-campus site. The written plan must set forth specific measurable objectives to be achieved by the student and describe a plan for evaluating student performance. In the case of students with disabilities, the IEP and Individual Written Rehabilitation Plan should contain specific provisions to satisfy these requirements. If any federal funds are involved, the school district must also secure from the off-campus cooperating institution assurances of compliance with Title VI (Civil Rights), Title IX (Sex Discrimination), Section 504 (Discrimination against the Handicapped), and Drug Free Workplace Requirements.

III. Granting High School Credit for Off-Campus Programs

To be eligible for off-campus instruction programs, students must be (1) 16 years old or older; (2) juniors or seniors in high school (except disabled students who need only be 16 or older and otherwise eligible); and (3) enrolled in classroom instruction directly related to and supportive of the off-campus instruction (related instruction) which is provided as a part of the school district's regular high school program. Eligible high school students participating in approved off-campus programs may be awarded high school credit in accordance with the following guidelines:

- A. Off-campus students must be enrolled in and receiving related instruction in the regular high school program before credit can be awarded for the off-campus experience. This restriction does not apply to disabled students whose IEPs indicate full-time work experience or to students participating in Option One of the Trade and Industrial/Health Occupations Internship Program.

Related instruction for students in cooperative vocational education programs must be concurrent with their off-campus experience. Related instruction for students may be less frequent than daily, but in no case may the related instruction be less than enough to justify a half-unit of high school credit (3,915 minutes).

- B. One-half, one, or more units of credit (depending on the number of minutes of instruction) may be awarded for the related classroom instruction in the regular program. Additional high school credit for off campus study or work experience in approved programs may be awarded under the following standards:

Students may be awarded one unit of credit for 10 to 19 hours weekly of off-campus study or work experience, which would total between 300 and 600 hours during a

school year, or two units of credit for 20 or more hours weekly of off-campus study or work experience.

No more than two units of credit, or twice the number of units of credit granted for related instruction (whichever is less) may be granted for off-campus study or work experience during any school year for off-campus academic programs, cooperative vocational education programs, and career exploration programs.

Students with disabilities whose IEPs indicate a need for additional supervised work experience to make the transition from school to the world of work may earn up to four units of credit during an academic year for off-campus work experience. The additional two units of credit would be based on increments of 20 to 30 hours weekly and 30 to 40 hours weekly of supervised work experience.

- C. High school credit awarded students for off-campus programs will be assigned to subject areas on the basis of the certification of the supervising teacher or coordinator, the related regular classroom instruction, and the nature of the off-campus program. Credit granted for off-campus instruction shall be counted as elective credit. Off-campus credit may be counted toward meeting the classification and accreditation standards for curriculum only when in a vocational educational program approved by the Department. Other types of off campus credit may not be counted toward meeting the curriculum standards.

IV. Authorization to Conduct Off-Campus Programs

Written proposals for off-campus programs must be approved annually by the appropriate section of the Department of Elementary and Secondary Education if the students are to be counted in membership and attendance for state aid purposes, if any special funding is involved, or if high school credit is to be granted. The following are procedures for obtaining approval:

- A. **Off-Campus Academic Programs:** Off-campus academic programs must be submitted in writing and approved in advance by the Coordinator, Supervision of Instruction Section. School districts wishing to establish such programs must submit a detailed written proposal for review and action.
- B. **Cooperative Vocational Education Programs:** Cooperative vocational education programs must be approved by the Division of Vocational and Adult Education. School districts wishing to establish such programs should apply for program approval to the appropriate section in that Division. All programs approved by the Division of Vocational and Adult Education must be designed and operated in conformity with the general policies of the Department and the specific provisions in the Vocational Education policies.
- C. **Work Experience for Students with Disabilities:** Work experience for special education students who are also eligible as clients of the Division of Vocational Rehabilitation may be provided under the general policies of the Department and the specific provisions in the State Plan for Part B of the Individuals with Disabilities Education Act (P.L. 94-142). School districts wishing to establish work-

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experience programs for disabled students should apply to the Division of Vocational Rehabilitation.

Note: Student with disabilities who are not eligible as clients of the Division of Vocational Rehabilitation may be provided on-the job work experience only through cooperative vocational education programs approved by the Division of Vocational and Adult Education as described in paragraph B above.

- D. *Career Exploration Programs:* Career exploration programs must be submitted in writing and approved in advance by the Coordinator, Supervision of Instruction Section. School districts wishing to establish such programs must submit detailed written plans for review and action.
- E. *Apprenticeship Programs:* These proposals must be submitted to and approved in advance by the Division of Vocational and Adult Education.

Appendix D

Cooperative Education Quality Factors Checklist

- _____ Applicants are screened to assure that they are prepared to meet employer demands.
- _____ Employers are selected to provide training for students related to their occupational interest.
- _____ Training agreement is developed that outlines the responsibilities of students, schools, employers, and coordinator.
- _____ Coordinator makes regular visits to training stations.
- _____ Student assessment is an integral part of instruction, and provisions are made for individual differences.
- _____ Results of the student assessment process are reported to students, teachers, parents, guidance counselors, and administrators as appropriate.
- _____ Students are placed in training stations related to their occupational career interest.
- _____ Appropriate records are kept on file for each student (i.e. training agreements, IMPs, employer evaluations, wage/hour reports).
- _____ Training stations are selected which provide occupational growth opportunities consistent with the student's capabilities, occupational interests, and learner outcomes.
- _____ Training sponsors of students are in compliance with federal, state, and local labor laws.
- _____ Training sponsors are advised of their responsibility to provide meaningful learning experiences for students.
- _____ Training sponsors provide information for the evaluation of the students.
- _____ Students enrolled in the program have an interest in and the ability to benefit from instruction as it relates to their career preparation.
- _____ Follow-up is conducted for students completing the cooperative program on an annual basis.

Appendix E

Missouri School Improvement Standards for Vocational Education

8.3 Vocational Education

8.3 A Vocational Education is an integral component of the district's education program.

- * 1. The vocational education program reflects the assessed needs of students, the labor market and the community.
- * 2. All students have an equal access to the full range of vocational education programs, services and activities.
- * 3. Vocational education enrollment is representative of the total school population.
- * 4. Students are provided appropriate support services to enter and succeed in the vocational education program.

8.3 B Competency-based curriculum has been implemented to meet the diversified needs of all students and prepare them for entry into the workplace and/or continued education.

- * 1. The curriculum for each course/program has identified competencies organized as units of instruction, with appropriate assessment methods and resources.
- * 2. An instructional management system exists for reporting student and class mastery of curriculum competencies.
- * 3. The curriculum and instructional strategies have been developed which integrate academic and vocational competencies.

8.3 C Vocational student organizations are in place as intra curricular instructional methods.

- * 1. The vocational student organizations (VSO) program provides opportunities for all students to develop personal leadership skills, gain occupational competence and be involved in community and school service.

8.3 D Vocational education programs provide students with assistance in the transition to the workplace and/or continued education.

- * 1. Work-site based educational opportunities are available including job

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shadowing, experiential education, cooperative education or apprenticeships.

- * 2. Off-campus programs comply with policies established by the Department of Elementary and Secondary Education.
- * 3. Articulation agreements have been implemented with post-secondary institutions.

8.3 E The district implements an accountability system to assess student progress and program effectiveness.

- * 1. Performance measures and standards have been identified.
- * 2. An evaluation based on performance measures and standards is conducted annually.
- * 3. Evaluation results are used to improve the vocational education program.

Appendix F

Training Agreement - A

Student: _____ Teacher: _____
Home Address: _____ Employer: _____
City: _____ Address: _____
Phone: _____ City: _____ Zip: _____
Job Title: _____ Phone: _____
Social Security Number: _____

Training Period: Beginning Date _____ Ending Date _____
Hours \ Week _____ Hourly Wage _____

The student enters this program to learn as much as possible from the employer in the nature of job information, skill and attitudes. The employer will determine the pay and hours the student will work. To earn credit the student must work a minimum of 10-15 hours per week.

The Student

1. will, while in the process of training, have the status of student and will not displace any regular employee.
2. will conform to all rules and regulations of the school and place of employment. The employer expects honesty, punctuality, cooperation, courtesy, and willingness to learn.
3. will maintain regular attendance at school and on the job. On-the-job attendance includes days when school is not in session (e.g., winter break).
4. will report absences in advance to the employer and the teacher. The student cannot receive credit for work on days when not in school unless previously approved by the teacher.
5. will keep all records and attend all recognition events (e.g. employer appreciation banquet) associated with this program.

The Parent/Guardian:

1. will encourage the student to do well in work experience.
2. will be responsible for providing transportation for the student for the work experience.
3. will be responsible, along with the student, for the safety and conduct of the student while they are at or between the school, the place of employment, and home.

The Teacher

1. will consult with the employer concerning the student's work.
2. will make periodic contacts/visits to the training station.
3. will counsel the student about the work experience.
4. will be available to help with training problems or program changes.

Employer

1. will train the student with the competencies included in the IMP and those needed for all job-related duties. Training should include safety instruction.
2. will help in the evaluation of the student.
3. will conform to all federal, state and local laws and regulations regarding employment of compensation of students. Students are not eligible for unemployment benefits but must be covered by worker's compensation.
4. will reserve the right to discharge the student for just cause from the training station. The teacher requests consultation prior to the action.

All adjustments in the training must be made through the teacher.

It shall be agreed that all parties participating in this program will not discriminate in training and /or employment opportunities on the basis of race, color, religion, gender, origin, or handicap.

Student _____
Date _____

Employer	Date
----------	------

Parent/Guardian	Date
-----------------	------

Teacher _____ Date _____

Training Agreement - B

Student _____
 Address _____
 Residence Phone _____
 Parent or Guardian _____

Employer _____
 Training Station _____
 Student Social Security # _____
 Date _____

1. The student agrees to:
 - ___ a. Do an honest day's work.
 - ___ b. Be punctual, properly attired and groomed, and loyal.
 - ___ c. Follow instruction, avoid unsafe acts, and be alert to unsafe conditions.
 - ___ d. Be courteous and considerate of the employer, customers and others.
 - ___ e. Keep required records of the cooperative education internship program.
 - ___ f. Be alert to perform unassigned tasks which promote the welfare of the business.
 - ___ g. Contact the teacher before resigning.
2. The parent/guardian agrees to:
 - ___ a. The student's training station.
 - ___ b. Provide transportation for the student to and from work.
 - ___ c. Assist in promoting the value of the student's experience by cooperation with the employer and teacher when needed.
3. The teacher, on behalf of the school, agrees to:
 - ___ a. Give systematic instruction at the school related to the student's duties and responsibilities at the training station.
 - ___ b. Visit the student on the job at intervals for the purpose of evaluation.
 - ___ c. Show discretion as to time and circumstances for visits, especially when work at the training station is more demanding.
4. The employer agrees to:
 - ___ a. Provide the student with opportunities to learn how to do many jobs well in this business.
 - ___ b. Assign the student new responsibilities according to their ability and progress.
 - ___ c. Assist the teacher to make an honest appraisal of the student's performance and progress.
 - ___ d. Avoid subjecting the student to unnecessary hazards.
 - ___ e. Contact the teacher before discharging the student.
5. All parties agree to:
 - ___ a. The length of the cooperative education period will include a minimum of ___ hours commencing _____ and terminating _____.
 - ___ b. Working hours during the cooperative education period will normally be:

From: _____	To: _____	During School Days _____
From: _____	To: _____	On Other Days _____

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It shall be agreed that all parties participation in this program will not discriminate in training and/or employment opportunities on the basis of race, color, religion, gender, origin, or handicap.

We, the undersigned, agree that we have read and understand the purpose and intent of this Training Agreement.

Student Date

Employer Date

Parent Date

Teacher Date

School Official Date

Appendix G

Cooperative Vocational Education Training Station Evaluation Checklist

Training Station _____ Date _____

Check the items that apply to this training station.

The training station:

- ☐ 1. has an accessible location
- ☐ 2. observes federal and state laws and employment regulations
- ☐ 3. has up-to-date facilities and equipment
- ☐ 4. has a favorable reputation in the community
- ☐ 5. provides a safe, ethical environment for the student
- ☐ 6. provides on-going training programs for employees
- ☐ 7. demonstrates a willingness to work with the teacher-coordinator and the student
- ☐ 8. provides the types of learning experiences to support the curriculum, not merely part-time employment
- ☐ 9. designates supervisory personnel to serve as training sponsors
- ☐ 10. evaluates the student in writing on a periodic basis
- ☐ 11. promotes school attendance and the standards/rules of the program
- ☐ 12. provides the minimum number of hours of employment per week
- ☐ 13. provides a wage commensurate with other beginning level employees in the same job.
- ☐ 14. provides an opportunity for advancement

Appendix H

Instructional Management Plan

Student: _____

Career Goals: _____

School: _____

Training Station: _____

RATING SCALE:

- 4 - Superior Performance by student
- 3 - Above Average Performance by student
- 2 - Average Performance by student
- 1 - Poor performance by student

Ratings are assigned by the instructor in conjunction with the employer, where appropriate.

Curriculum Goal	Application Experience	Evaluation for Current Grading Period: _____
Communication	A008: Complete information about a product or service sold by your place of employment. Write a letter to the manufacturer or supplier and give a report	
Communication	A007: In a written report explain your company's dress code and grooming and reasons behind the policy.	
Communication	A008: Develop a plan to improve an aspect of your business (example: exchange policy, layaway, etc.)	
Economic Concepts	B001: Determine the marketing strategy of your place of employment . Submit a report on your work.	
Economic Concepts	B005: Determine the marketing strategy of your place of employment. Submit a report.	
Economic Concepts	B019: Submit information concerning the market price for a new product or service at your place of employment.	
Advertising & Sales Promotion	H006: take one product or service and explain the advantages and disadvantages of the promotion concerning that item. You may include interviews with customers.	

Instructional Management Plan

Student: _____

Career Goals: _____

School: _____

Training Station: _____

RATING SCALE:

4 - Superior Performance by student

3 - Above Average Performance by student

2 - Average Performance by student

1 - Poor performance by student

Ratings are assigned by the instructor in conjunction with the employer, where appropriate.

Curriculum Goal	Application Experience	Evaluation for Current Grading Period: _____

Appendix I

Instructional Program

The Cooperative Occupational Education (COE) instructional program offers preparation for employment in a variety of occupational areas. COE programs may operate either as a two-year program or a one-year senior level course offering.

Sequence of Courses for a Two-Year Program

If offered as a two-year program, the following sequence of courses is provided:

Course title: Cooperative Occupational Education-1

Description: An instructional program designed to meet the occupational preparation through instruction in a classroom setting. Specifically, cooperative occupational education offers instruction with the primary goal of preparing individuals for entry, adjustment and advancement in a variety of occupations. It may serve as a prerequisite for COE-2. Offered the junior year.

Course code number: 040003

Type of certification: COE

Type of credit: Elective (one unit for a year long class, for one period per day)

Prerequisite: None required

Course Title: Cooperative Occupational Education-2

Description: An instructional program designed to provide specialized occupational instruction in conjunction with Supervised Cooperative Occupational Education Employment. Offered the senior year.

Course code number: 040004

Type of certification: COE

Type of credit: Elective (one unit for a year long class, for one period per day)

Prerequisite: COE-1

Course Title: Supervised Cooperative Occupational Education Employment

Description: Students are placed in a training station that directly contributes to the development of competencies necessary for successful employment in an occupational field. Must be concurrently enrolled in COE-2.

Course code number: 040081

Type of certification: COE

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Type of credit: Elective (one to two units for either one or two periods per day for year-long employment).

Prerequisite: COE-2 enrollment

Note: If offered only as a single, senior only, course offering, then the Cooperative Occupational Education - 2 class and the supervised Cooperative Occupational Education Employment are provided.

Students, upon completion of the course, are granted one unit of credit; thus, if the COE program is a two-year program, the student could earn two units of credit for completing COE-1 and COE-2. In addition, one hour of credit is awarded for the supervised employment if the student averages ten hours of on-the-job training per week. An additional one unit of credit may be earned for supervised employment if the student averages twenty hours of on-the-job training per week. The maximum number of units of credit a student may earn in one year is three (one for completion of the course and two for the supervised employment). Based upon satisfactory performance, students may earn a separate grade and credit for both the classroom and on-the-job training activities. In some situations, a single grade and credit may be awarded for both the classroom and on-the-job training activities.

Occupational Codes for Supervised Employment in COE

Students in the Cooperative Occupational Education program have selected the program to prepare for a variety of occupational areas. The training station in which students are placed as a part of the supervised employment phase of the program must be appropriate for the occupational category of the Cooperative Occupational Education program. Since the COE program includes such occupational areas as agribusiness, office, marketing, health, and trades, a variety of occupational codes can be utilized.

The Classification of Instructional Programs (CIP) designates occupational fields by code numbers. Placements for COE programs are usually designated by the following codes (these are listed by major occupational areas):

- 01.00 Agribusiness and Agricultural Products
 - 01.01 Agricultural Business and Management
 - 01.02 Agricultural Mechanics
 - 01.03 Agricultural Products and Processing
 - 01.04 Agricultural Services and Supplies
 - Agricultural Supplies Marketing
 - Animal Grooming
 - 01.06 Horticulture
 - Floriculture
 - Greenhouse Operation and Management
 - Landscaping
 - Nursery Operation and Management
 - Turf Management
- 07.00 Business and Office
 - 07.01 Accounting, Bookkeeping, and Related
 - 07.02 Banking and Related Financial Programs

- Credit Collections Clerk
- Insurance Clerk
- Teller
- Transit Clerk
- 07.03 Business Data Processing
 - Business Computer and Console Operation
 - Business Data Entry Equipment Operation
 - Business Data Programming
- 07.06 Secretarial
 - Stenographic
 - Word Processing
- 07.07 Typing, General Office
 - Clerk-Typist
 - General Office Clerk
 - Receptionist and Communications Systems Operation
- 08.00 Marketing
 - 08.01 Apparel and Accessories Marketing
 - 08.02 Business and Personnel Services Marketing
 - 08.03 Entrepreneurship
 - 08.04 Financial Services Marketing
 - 08.05 Floristry, Farm and Garden Supplies Marketing
 - 08.06 Food Marketing
 - 08.07 General Marketing
 - 08.08 Home and Office Products Marketing
 - 08.09 Hospitality and Recreation Marketing
 - 08.10 Insurance Marketing
 - 08.11 Transportation and Travel Marketing
 - 08.12 Vehicles and Petroleum Marketing
- 17.00 Allied Health
 - 17.03 Medical Laboratory Technologies
 - Clinical Laboratory Aide
 - 17.04 Mental Health/Human Services
 - Community Health Work
 - Home Health Aide
 - 17.05 Miscellaneous Allied Health Services
 - Central Supply Technology
 - Medical Assisting
 - Medical Office Management
 - Medical Records Technology
 - Veterinarian Aide
 - Ward Clerk
 - 17.06 Nursing Related Services
 - Geriatric Aide
 - Nursing Assistant
- 46.00 Construction Trades
 - 46.01 Brickmasonry, Stonemasonry, and Tile Setting
 - 46.02 Carpentry

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- 46.03 Electrical and Power Transmission Installation
- 46.04 Miscellaneous Construction Trades
 - Building Maintenance
 - Concrete Planking and Finishing
 - Drywall Installation
 - Painting and Decorating
 - Plastering
 - Roofing
- 46.05 Plumbing, Pipefitting, and Steamfitting

- 47.00 Mechanics and Repairers
 - 47.01 Electrical and Electronic Equipment Repair
 - 47.02 Heating, Air-Conditioning, and Refrigeration Mechanics
 - 47.03 Industrial Equipment Maintenance and Repair
 - 47.04 Miscellaneous Mechanics and Repairers
 - Gunsmithing
 - Locksmithing and Safe Repair
 - Musical Instrument Repair
 - Audio-Visual Equipment Repair
 - Shoe and Boot Repair
 - Watch Repair
 - 47.06 Vehicle and Mobile Equipment Mechanics and Repairers

- 48.00 Precision Production
 - 48.01 Drafting
 - 48.02 Graphic and Printing Communications
 - 48.03 Leatherwork and Upholstering
 - 48.04 Precision Foods Production
 - 48.05 Precision Metal Work
 - 48.06 Precision Work, Assorted Materials
 - 48.07 Woodworking

In addition to the above CIP codes, Cooperative Occupational Education programs can serve students in other occupational areas which may not be classified in these codes.

Appendix J

SCANS Competencies

Five Competencies

Resources: Identifies, Organizes, Plans and Allocates Resources

- A. *Time* - Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules
- B. *Money* - Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives
- C. *Material and Facilities* - Acquires, stores, allocates, and uses materials or space efficiently
- D. *Human Resources* - Assesses skills and distributes work accordingly, evaluates performance and provides feedback

Interpersonal: Works with Others

- A. *Participates as Member of a Team* - contributes to group effort
- B. *Teaches Others New Skills*
- C. *Serves Clients/Customers* - works to satisfy customers' expectations
- D. *Exercises Leadership* - communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies
- E. *Negotiates* - works toward agreements involving exchange of resources, resolves divergent interests
- F. *Works with Diversity* - works well with men and women from diverse backgrounds

Information: Acquires and Uses Information

- A. *Acquires and Evaluates Information*
- B. *Organizes and Maintains Information*
- C. *Interprets and Communicates Information*
- D. *Uses Computers to Process Information*

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Systems: Understands Complex Inter-Relationships

- A. *Understands Systems* - knows how social, organizational, and technological systems work and operates effectively with them
- B. *Monitors and Corrects Performance* - distinguishes trends, predicts impacts on system operation, diagnoses deviation in systems' performance and corrects malfunction
- C. *Improves or Designs Systems* - suggest modification to existing systems and develops new or alternative systems to improve performance

Technology: Works with a Variety of Technologies

- A. *Selects technology* - chooses procedures, tools or equipment including computer and related technologies
- B. *Applies Technology to Task* - Understands overall intent and proper procedures for setup and operation of equipment
- C. *Maintains and Troubleshoots Equipment* - Prevents, identifies, or solves problems with equipment, including computers and other technologies

A Three-Part Foundation

Basic Skills: Reads, writes, performs arithmetic and mathematical operations, listens and speaks

- A. *Reading* - locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules
- B. *Writing* - communicates thoughts, ideas information, and messages in writing; and creates documents such as letters, directions, manuals, reports, graphs, and flow charts
- C. *Arithmetic/Mathematics* - performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques
- D. *Listening* - receives, attends to, interprets, and responds to verbal messages and other cues
- E. *Speaking* - organizes ideas and communicates orally

Thinking Skills: Thinks creatively, makes decisions, solves problems, visualizes, knows how to learn, and reasons

- A. *Creative Thinking* - generates new ideas
- B. *Decision Making* - specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative
- C. *Problem Solving* - recognizes problems and devises and implements plan of action
- D. *Seeing Things in the Mind's Eye* - organizes, and processes symbols, pictures, graphs, objects, and other information
- E. *Knowing How to Learn* - uses efficient learning techniques to acquire and apply new knowledge and skills
- F. *Reasoning* - discovers a rule or principle underlying the relationship between two or more objects, and other information

Personal Qualities: Displays responsibility, self-esteem, sociability, self-management, and integrity and honesty

- A. *Responsibility* - exerts a high level of effort and perseveres towards goal attainment
- B. *Self-Esteem* - believes in own self-worth and maintains a positive view of self
- C. *Sociability* - demonstrates understanding, friendliness, adaptability, empathy, and politeness in group settings
- D. *Self-Management* - assesses self accurately, sets personal goals, monitors progress, and exhibits self-control
- E. *Integrity/Honesty* - chooses ethical courses of action

Glossary

Authentic Assessment: Measuring and evaluating student performance in real-life situations. Assessing student mastery of hands on experiences with equipment, devices, and people within a meaningful context.

Cooperative Education: An organized method of instruction designed to provide supervised on the job training, related vocational instruction, and required academic courses through a written agreement between the student, school, and employer.

Coordinator: The portion of the teacher-coordinator's job which involves selecting training stations, placing students, evaluating student progress on the job, and coordinating theory and practice.

Competency: The knowledge, skills, and abilities required to master or complete a task or activity.

General Work Place Competencies: The knowledge, skills, and abilities required to obtain a position and advance in any career field.

High Demand Occupation: Occupations that are expected to have average or higher growth through the year 2000, have at least 100 job openings annually, and annual supply of training program completers available to enter the work force does not exceed the job openings estimated for the occupation by twenty percent or more.

High Wage Job: A job in an occupation that has a beginning wage rate at or above the recorded twentieth percentile for that occupation as determined by wage surveys conducted by the Missouri Department of Employment Security and published annually by the Missouri Department of Elementary and Secondary Education.

Instructional Management Plan (IMP): Specifies and matches application experiences to general related curriculum, occupational specific curriculum, and occupational specific tasks. Used to plan and evaluate the ability of student activities, class projects, and on the job work experiences to master competencies.

Local Education Agency (LEA): A legally constituted educational institution or agency responsible for operating and administering educational programs.

Missouri Occupational Information Coordinating Committee (MOICC): Assists the state in providing necessary data and communication linkages. Brings together producers and users of occupational information and presents occupational information for a variety of uses.

Missouri School Improvement Program (MSIP): Accreditation system which measures process standards and performance standards of all Missouri schools; used to improve schools and to ensure all schools meet basic standards.

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Missouri State Council on Vocational Education: Appointed by the governor, main responsibilities are to make recommendations regarding the state vocational education plan, policies that the state should pursue, and initiatives and methods that the private sector could undertake to assist in the modernization of vocational education programs.

Performance Standards: Clear expectations of what a student should know and be able to do as a result of an educational process or program. State performance standards exist for all Missouri high school graduates.

Secondary Employment: Employment in an occupation in which little or no chance for advancement exists, usually accompanied by below average wages.

School To Work Opportunities Act (STWOA): Designed to assist students in making the transition from school to a good first job on a high skill, high wage track. It builds a partnership between schools and business and prepares students for jobs requiring technical skills or further education. Involves a life long learning process.

Tech Prep: An alternative to the college prep track in secondary schools. It integrates academics with vocational courses in a curriculum that articulates from high school to post-secondary education in a seamless and efficient manner. Permits associate degree graduates to obtain advanced skills.

Targeted Jobs Tax Credit (TJTC): Permits employers to obtain tax credits for employment of individuals who fall into certain categories which are traditionally underemployed or unemployed.

Training Agreement: A non legal document that outlines the responsibilities of the student, teacher-coordinator, employer, school, and parents. It is agreed upon and signed by all parties before students accept cooperative work position.

Training Plan: An individualized plan developed by the teacher coordinator, job training sponsor, and the student. Is a plan of the anticipated work place activities and in class instruction for a given time period; used to coordinate work and school experiences.

Training Sponsor: The individual at the work site responsible for the training, evaluation, and development of the student. The contact person for the teacher-coordinator.

Training Station: The place of employment where the student's on the job training activities takes place.

Vocational Education: A broad array of educational programs designed to prepare a person to enter an, be upgraded within an, or to retrain for a new, occupation requiring education at less than the baccalaureate degree level. Programs usually includes competency based, applied learning principles.

Vocational Instructional Management System (VIMS): A system for organizing student performance in outcomes based instructional programs, providing records of mastery of competences.

Work Certificate: Also known as a work permit. Required of students who are under the age of 16 before they can work. Available from each school district's superintendent's office.

Work Place Skill Development Opportunities: Any continued training opportunities that are provided by an employer for employees for the purpose of advancing their occupational skills, keeping them current with technological advances, and coping with changes in the work place.

References

- Critical Skills Foundation. (1992). *Applied learning: Implementing SCANS & learning a living*. Wheaton, IL: Critical Skills Foundation.
- Kazis, R. (1993). *Improving the transition from school to work in the United States*. Washington: American Youth Policy Forum, Competitiveness Policy Council.
- National Center for Research in Vocational Education. (1992). *Establish guidelines for your cooperative vocational program*. Athens, GA: American Association for Vocational Instruction Materials.
- Secretary's Commission on Achieving Necessary Skills (SCANS). (1991). *What work requires of schools: A SCANS report for America 2000*. Washington: United States Department of Labour.
- United States General Accounting Office. (1990). *Training strategies: Preparing youth for employment in the U.S. and foreign countries*. Washington: U.S. General Accounting Office.
- United States General Accounting Office. (1991). *Transition from school to work: Linking education and worksite training*. Washington: U.S. General Accounting Office.
- William T. Grant Foundation Commission on Youth and America's Future. (1988). *The forgotten half: Pathways to success for America's youth and young families*. Washington: Author.
- William T. Grant Foundation Commission on Work, Family, and Citizenship. (1992). *States and communities on the move: Policy initiatives to create a world-class workforce*. Washington: Author.